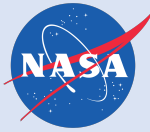


# GGOS External Relations Report



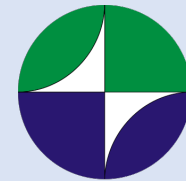
Allison Craddock

GGOS External Relations Manager

Jet Propulsion Laboratory, California Institute of Technology

GGOS Days, October 2018

Tsukuba, Japan



IUGG



Global Geodetic  
Observing System

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# OVERVIEW

## Participation and Representation in External Stakeholder Organizations

- United Nations Global Geospatial Information Management (GGIM) Subcommittee on Geodesy (SCoG)
- Group on Earth Observations (GEO)
- Committee on Earth Observation Satellites (CEOS)
- International Council for Science (ICSU) World Data System (WDS)

## Current External Relations Projects

- Connecting United Nations Initiatives with the GGOS Geohazards Focus Area through the GAR19 Report
- Connecting the GEO Work Program (Sendai) and CEOS (SDGs) United Nations Initiatives with GGOS

## Future External Relations Projects

- IAG/GGOS Geodetic Academic Network
- External Essential Variables Identification

## **Participation and Representation in External Stakeholder Organizations**

- United Nations Global Geospatial Information Management (GGIM)  
Subcommittee on Geodesy (SCoG)



# United Nations Global Geospatial Information Management (GGIM) Subcommittee on Geodesy (SCoG)



United Nations



Global Geodetic  
Reference Frame

## SCoG Major Activities

- To provide an intergovernmental forum, with equitable international representation, for communication and cooperation on issues relating to **the maintenance and enhancement of a Global Geospatial Reference Frame (GGRF)**;
- To develop a roadmap for a **collaborative global geodetic observation network and the associated infrastructure**, with sustainable funding and investment, as well as strategic partnerships between mapping, space and other interested agencies;
- To encourage **open sharing of geodetic data and information** that contribute to regional and global reference frames;
- To advocate for guidelines and standards to **advance the interchangeability and interoperability** of geodetic systems and data;
- To **address various technical, institutional and policy issues** related to the implementation of a GGRF



# UN-GGIM Subcommittee on Geodesy (SCoG)

Within the past year, the **work of the Subcommittee has started transitioning from ideological to implementation-based**

**GGOS participation in SCoG focus groups**, on behalf of the IAG, has ensured initial takeoff and continued momentum of progress toward a GGRF:

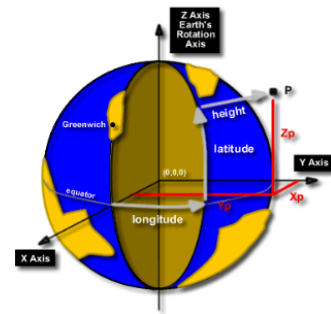
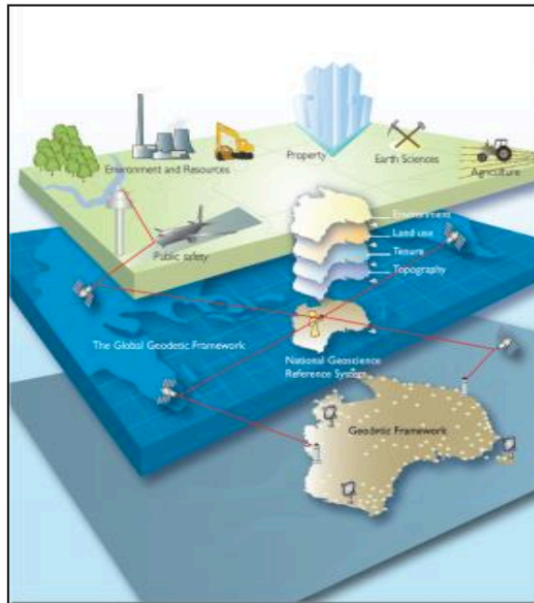
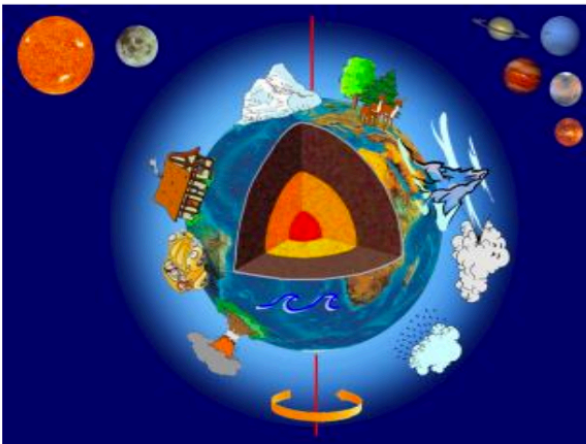
- GGOS Consortium members H. Schuh and D. Angermann participate in Subcommittee Focus Groups on behalf of the IAG; M. Pearlman also serves as alternate IAG representative
- Consortium members Gross, Craddock, and G. Johnston participating on behalf of their member states (countries).

## 2018 Accomplishments (tabled at UN CoE GGIM 8)

- ✓ **GGRF Road Map Implementation Plan**
  - ✓ Sections on each Focus Group (except Governance)
- ✓ **Position Paper on Appropriate Governance Arrangements**
  - ✓ Recommends Subcommittee investigate the establishment of a UN Convention on Geodesy
- ✓ **Revised Terms of Reference adopted**
  - ✓ To enable increased working capacity of Subcommittee



- The Global Geodetic Reference Frame (GGRF) is the foundation of virtually every aspect of the collection, management and use of national geospatial information and global monitoring of the Earth
- The GGRF underpins:
  - Earth and Climate science
  - Economic Development and Sustainability, including efficiencies in Industry
  - Public Safety and Disaster Management
  - Land and Water Administration, and Environmental Management



UN-GGIM

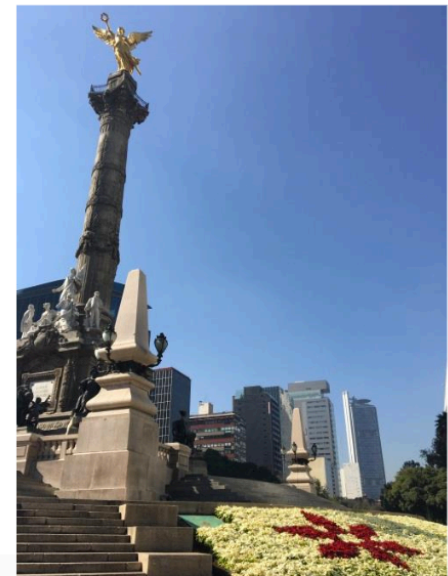
United Nations Committee of Experts on  
Global Geospatial Information Management

[ggim.un.org](http://ggim.un.org)

Slide courtesy of Gary Johnston/ UN GGIM SCoG

# Sub-Committee activities

- Sub-Committee on Geodesy (SCoG) comprises 40 Member States, with 9 vacant seats from Africa. The International Association of Geodesy (IAG) and the International Federation of Surveyors (FIG) are Associate Members.
- Sub-Committee efforts have focused on development of the Roadmap Implementation Plan, and Position paper on Governance.
- The inaugural meeting of the SCoG occurred in the margins of the HLF in Mexico city, November 2017. Several informal SCoG meetings have occurred along with numerous teleconference meetings which focused on developing the draft Road map Implementation Plan and Position paper on Governance

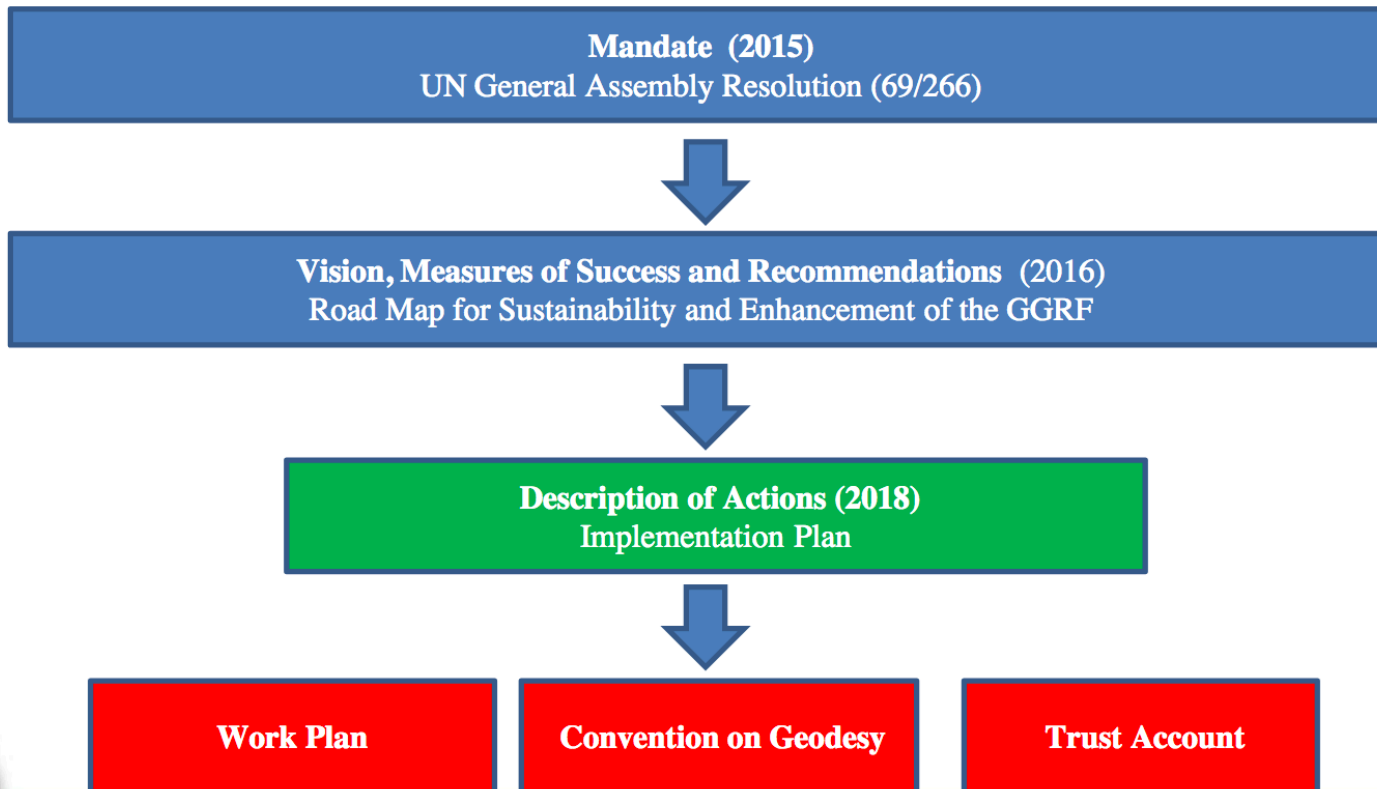


Slide courtesy of Gary Johnston/ UN GGIM SCoG



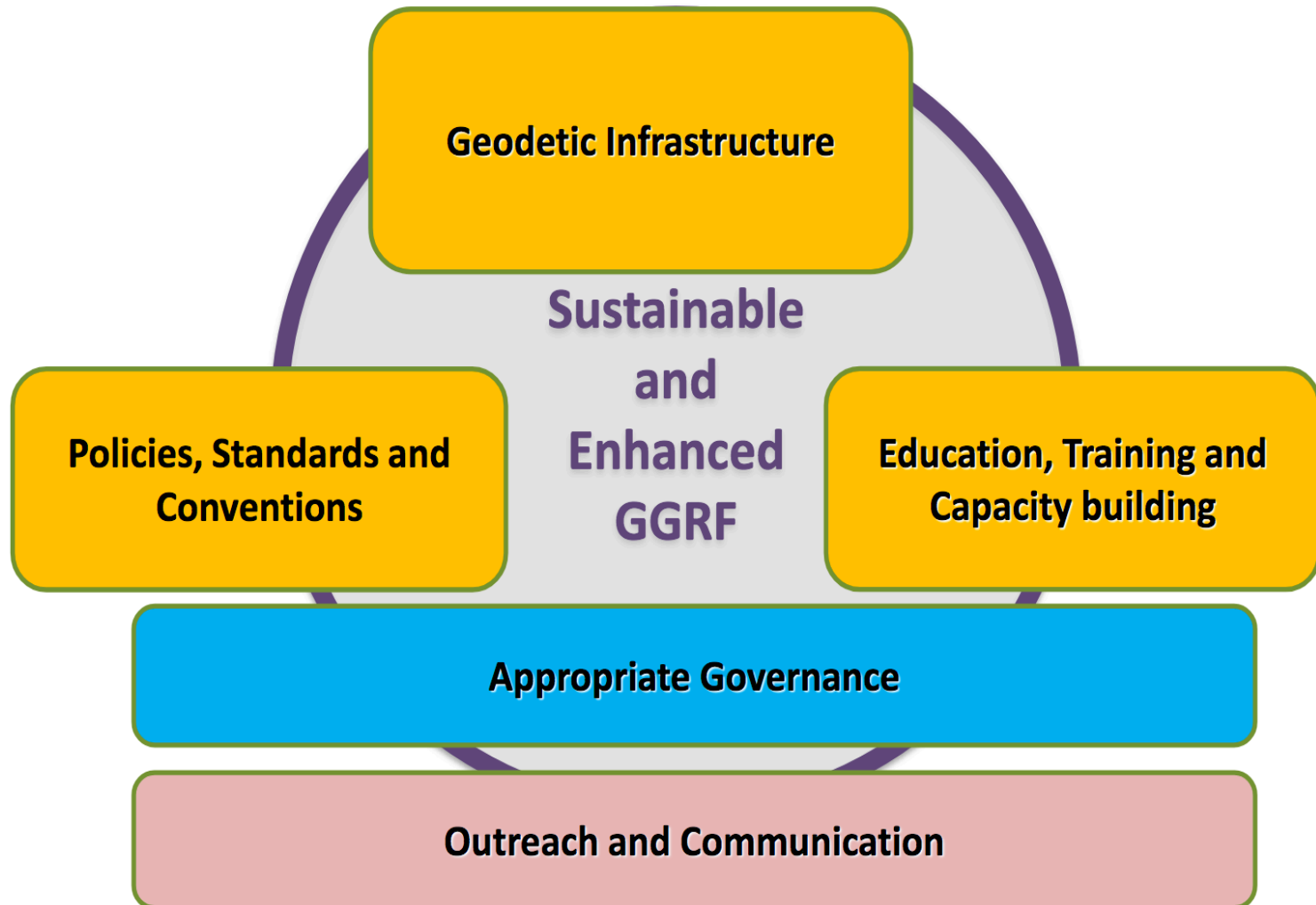
# Sub-Committee Progress

- Recognising its importance the UN General Assembly adopted resolution 69/266 in February 2015, entitled 'A Global Geodetic Reference Frame for Sustainable Development'
- At the 6<sup>th</sup> session of UN GGIM, the Road Map for the development and sustainability of the Global Geodetic Reference Frame was endorsed by the CoE, who then requested the development of an implementation plan, and a Position paper on Governance



## Road Map VISION

An accurate, sustainable and accessible Global Geodetic Reference Frame to support science and society



# Implementation Plan

- Implementation plan reports on work of the focus groups on Geodetic Infrastructure; Policies, Standards and Conventions; Education, Training and Capacity Building; and Outreach and Communication
- Reviews the Measures of Success and Recommendations which were included in the Road Map (which was endorsed at the 6<sup>th</sup> session (2016))
- Develops action for each of the recommendations detailed in the Road Map
- Provides additional background and reference material in the annexes

## Highlights

- Compilation of geodetic standards
- Case Studies of data sharing policies
- Questionnaire on Reference Frame Competency as input to planning for education, Training and Capacity Building
- Plan to create of a Geospatial Communication network

## Next Steps

- Develop a work plan to start real action
- Engage more strongly with Nations on their needs



# Position Paper on Governance

- The Road Map (which was endorsed at the 6<sup>th</sup> session (2016)) recognised the need for enhanced governance of global geodesy
- At the 6<sup>th</sup> Session the CoE asked the Sub-Committee on Geodesy to develop a Position Paper on Governance, and bring it back at the 8<sup>th</sup> session
- The Position Paper suggests possible future initiatives that could fill the current gaps in governance arrangements and their respective attributes
- Position Paper is a discussion document which is intended to commence a broader consultation process which will explore the viability of future governance mechanisms, including those identified in the paper

## **Key Points**

- Possible creation of a UN convention on geodesy in the medium to long term as a way of engaging commitment from the willing member states
- Creation of a UN Trust Account, as a mechanism for managing financial contributions from appropriate donors
- Modification / enhancement of the Sub-Committee Terms of Reference to provide clearer description of the modalities and procedures

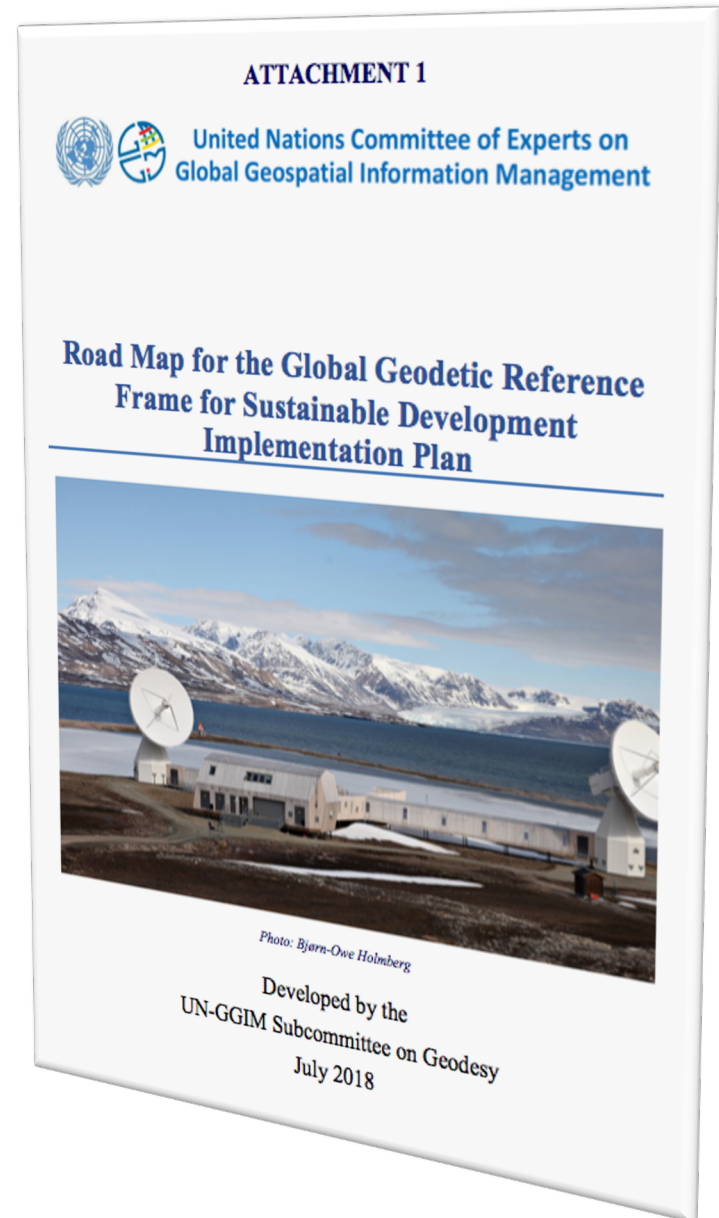
## **Next Steps**

- Encourage broader participation in SCoG activities through new TOR's
- SCoG to work with the CoE and secretariat to explore governance mechanisms including broad consultation when appropriate

# UN-GGIM Subcommittee on Geodesy (SCoG)

## Future Work

- ☐ Action on the Implementation Plan
- ☐ Further develop the Communications Expert Network (leveraging GEO)
- ☐ Second generation of geodetic capacity building survey
  - ☐ Using GGRF-wide and approved metrics, assess the geodesy training needs (and abundances) of each member state or region, particularly focused on providing resources to developing countries
  - ☐ Establish a priority list of short- and long-term training needs, their objectives, and required resources for achievement
- ☐ Comprehensive results of first capacity building survey to be presented at SCoG Workshop in November
- ☐ Investigate establishing a **UN Convention on Geodesy**



## Newsletter

July / August 2018

08

## UN RESOLUTION

In February 2015 the UN General Assembly adopted the resolution "A Global Geodetic Reference Frame for Sustainable Development" – the first resolution recognizing the importance of a globally-coordinated approach to geodesy.

The UN-GGIM Subcommittee on Geodesy was inaugurated in Mexico City in November 2017. The subcommittee is now presenting the position paper defining appropriate governance arrangements for the GGRF, and has finalised the roadmap implementation plan.

unggrf.org

# From a UN mandate to commitment for global geodesy

Without commitment by Member States, the Global Geodetic Reference Frame (GGRF) will be in danger of degradation over time and consequently gradually lose its required accuracy and fundamental role in societal and scientific applications. As demonstrated by the GGRF Governance Position Paper a UN GGRF convention could be the long-term solution to this problem.



PHOTO: SUSAN-OWE HOLMBERG

**NY-ÅLESUND:** Dr. Zuheir Altamimi, France, is responsible for the international terrestrial reference frame. He encourages nations to follow Norway's and Australia's examples.

"The UN General Assembly resolution on the GGRF for sustainable development calls for commitments by Member States to improving national geodetic infrastructure as an essential means to enhance the global geodetic reference frame. Without commitment by Member States, the GGRF will be in danger of degradation over time and consequently will gradually lose its required accuracy and fundamental role in societal and scientific applications. The current developments and investments to enhance the geodetic infrastructure in Australia, and more recently the inauguration of the new geodetic Earth observatory in Ny-Ålesund by Norway are concrete

examples to follow by other nations", says Zuheir Altamimi, France.

## No one country can do this alone

"For the global geodetic reference frame to be sustainable all countries need to play a role, with many of the developed countries providing assistance to the less developed countries where possible, while also continuing



PHOTO: ANDRECK LAL

**PACIFIC ISLANDS:** GPS for defining territorial sea baseline on the Gilbert Islands of Kiribati.

to upgrade their own contribution to GGRF to enhance its quality," says Gary Johnston, co-chair of the UN-GGIM Subcommittee on Geodesy, representing Australia.

While many countries have a willingness to cooperate in this way, currently no clear mechanism exists to facilitate cooperation, especially where the sharing of resources is required.

## Facilitate commitment

"It is our belief that a UN convention on geodesy will create such a mechanism. Coupled with the possible creation of a UN trust account, which would provide a financial mechanism for donor contribution to this effort, we believe many of the current barriers to success will become far more manageable, therefore improving the outcome for all UN Member States, and the eventual successful and sustainable enhancement of the Global Geodetic Reference Frame", says Johnston.

"The legal framework allowable by a UN convention should provide a basis for the coordination of joint work of Member States in the field of global geodesy. It will also provide governmental support and attention to the development of the GGRF both at the national and the global level", says Alexey Trifonov, co-chair of the UN-GGIM Subcommittee on Geodesy, representing the Russian Federation.

## The Global Geodetic Reference Frame – towards sustainability

2015: Mandate	2016: Plan	2018: Action	Next step: Commitment
The UN General Assembly adopted the resolution 'A global geodetic reference frame for sustainable development'.	The UN-GGIM Committee of Experts endorsed the Road Map for the Global Geodetic Reference Frame (GGRF) and noted the need for an appropriate governance structure in order to effectively implement the Road Map.	The UN-GGIM Subcommittee on Geodesy presents the GGRF Road Map Implementation plan and the Governance Position Paper to the UN-GGIM Committee of Experts.	UN-GGIM facilitates Member State commitment to the GGRF in accordance with the UN General Assembly Resolution (A/RES/69/266) and the GGRF Road Map recommendations.

"In a formal program evaluation in 2018 the Government of Canada noted significant program integrity concerns about global and (thereby) our national geodetic reference systems, echoing concerns raised at the UN-GGIM level. Canada views the establishment of stronger governance in Geodesy as an important means to ensure integrity of the fundamental systems that support the Global Geodetic Reference Frame (GGRF) and client access to this frame."

**Calvin Klatt, Canada**

"In order to ensure long-term policies related to the development of the GGRF in developing countries like Argentina, the GGRF UN-convention is an essential governance mechanism that will encourage legislators and stakeholders to invest in a more homogeneously distributed geodetic infrastructure."

**Diego Piñon, Argentina**



**ARGENTINA:** Recent relative-gravity campaign to strengthen the GGRF.

PHOTO: INSTITUTO GEOGRÁFICO NACIONAL ARGENTINA

## The GGRF Governance Position Paper

Recommends to:

1. Start an investigation regarding the establishment of a GGRF UN-convention to enable Member States to commit to the development and sustainability of the GGRF
2. Investigate the future need for a professional operations organisation for the GGRF
3. Strengthen the subcommittee on Geodesy as a governance arrangement for the GGRF by revising the subcommittee Terms of Reference.
4. Initiate the establishment of a UN GGRF trust fund to support and promote Member State activities

"The establishment of a GGRF UN-convention will most likely have positive impact outside of the GGRF. Successful establishment of such a convention will clearly demonstrate the importance of UN-GGIM and the UN-GGIM decisiveness and ability to act. It will likely raise the awareness and profile of geospatial data in general."

**Laila Løvheim, Norway,**  
lead of the GGRF Governance Focus Group.



**MALAWI:** Towards an accurate, sustainable and accessible global geodetic reference frame.

PHOTO: SUSAN-OWE HOLMBERG

**"A global reference frame is key if you want to be able to compare data from all continents; and to empower scientists from all parts of the world – to really give precise information, to make the planet a better place."**

**Erik Solheim, Executive Director, United Nations Environment Programme**



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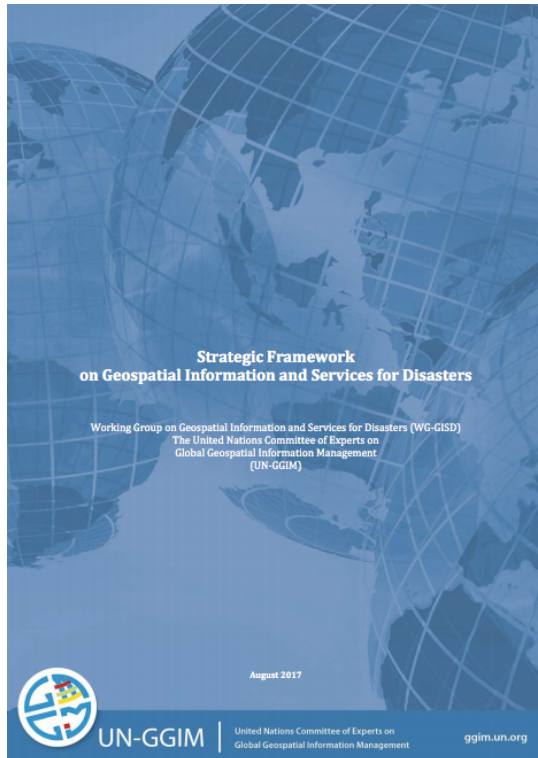
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# UN-GGIM

## Strategic Framework on Geospatial Information and Services for Disasters



**Geospatial Information and services are important for Disaster Risk Reduction.**

The United Nations Committee of Experts on Global Geospatial Information Management has approved an overarching strategic framework to ensure that geospatial information can be available to those who need it, at the time they need it.

# Participation and Representation in External Stakeholder Organizations

➤ Group on Earth Observations (GEO)

# GROUP ON EARTH OBSERVATIONS

## *Connecting the GEO Work Program United Nations Initiatives with GGOS*

- GEO's global priorities include supporting the **UN SDGs** and **Sendai Framework**, as well as the Paris Agreement on Climate Change.



### EARTH OBSERVATIONS FOR THE SUSTAINABLE DEVELOPMENT GOALS

**Earth Observations for the Sustainable Development Goals (EO4SDG)**, an initiative led by **GEO** that seeks to organize and realize the potential of Earth observations and geospatial information to advance the UN 2030 agenda, and enable societal benefits (and where possible, quantification of these benefits) across SDGs.





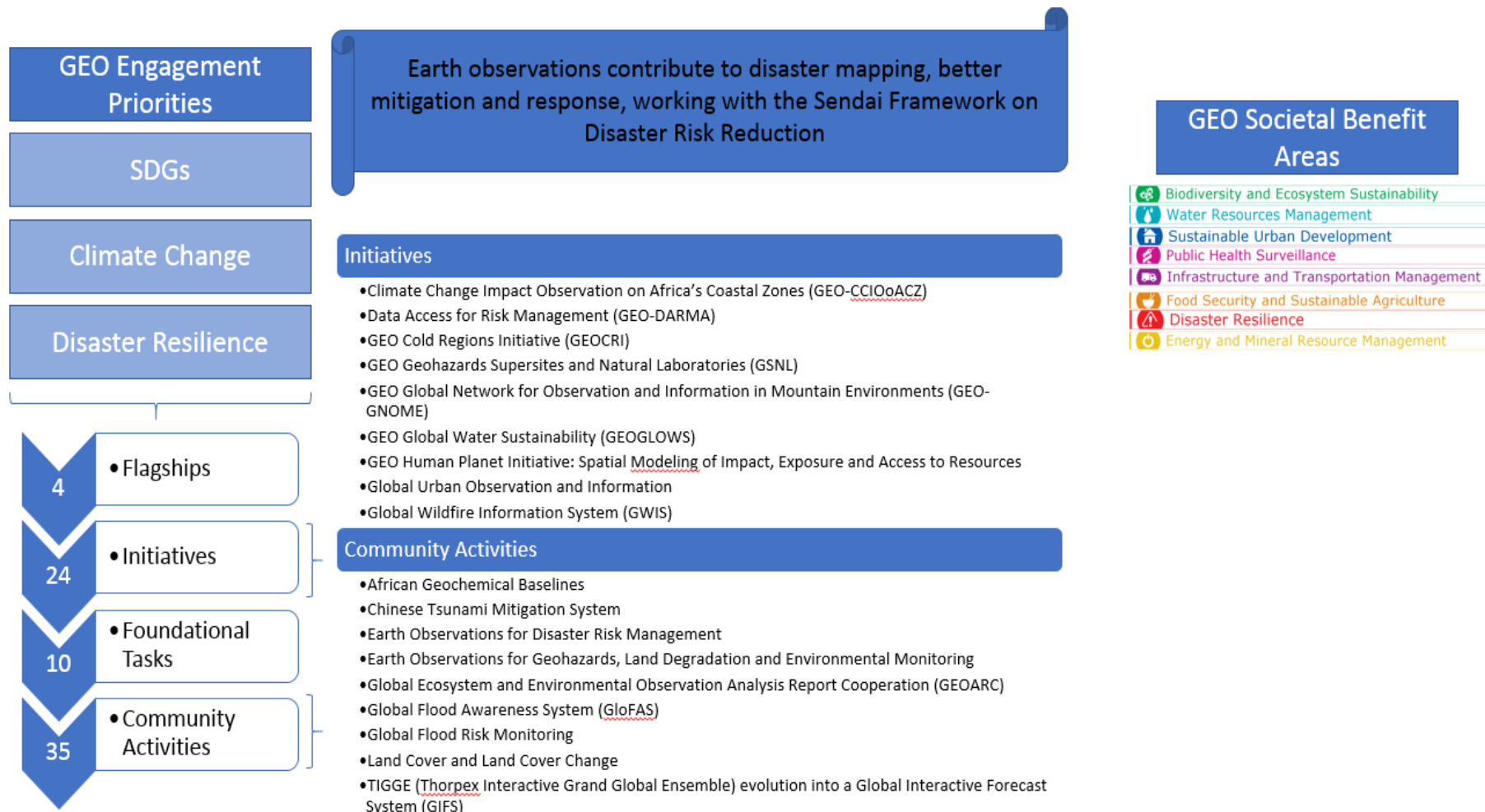
## 2018 Activity

- Programme Board: IAG/GGOS represented by Richard Gross (Principal) and Allison Craddock (Alternate) starting January 2018.
  - Programme Board oversees **establishment of Work Programmes at a critical transition time within GEO**
  - Works to align proposed activities with GEO priorities and committed resources – this is especially relevant in light of new Secretariat Director Gilberto Camara's **vision of a GEO whose work has real purpose, outcome, and effects; an organization that not only facilitates open data sharing, but also knowledge and applications.**
- Programme Board Subgroup on Sendai
  - Identify how GEO can support Sendai Framework for Disaster Risk Reduction
  - IAG/GGOS joined Subgroup in order to **promote importance of geodetic observations for disaster risk reduction**
- Programme Board Subgroup on Sustainable Earth Observations
  - Assess tasks on GEOSS satellite and in situ Earth observation resources
  - Recommend ways of integrating satellite and in situ Earth observations
  - IAG/GGOS joined Subgroup in order to **promote importance of geodetic observations to satellite and in situ Earth observation communities**



# What does GEO do?

## Disaster Risk Reduction in the GEO Work Programme



# Supporting Sendai

## Coordinating EO for Disasters

**GEO supports  
implementation of  
Sendai Framework  
targets E,F and G  
through engagement  
with UNISDR.**

**E:** Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020;

**F:** Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of the present framework by 2030;

**G:** Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to people by 2030.

## Value of EO for DRR

Earth Observations for Disaster Risk

EO data and information can provide a broad overview of large disaster-affected areas quickly. Using EO data and technology, disaster risks can be identified and assessed, and risks can be prevented or mitigated.



## Disaster Risk Reduction

A GEO Priority Engagement Area

GEO supports Disaster Risk Reduction by improving coordination of Earth observations to increase ability to disaster forecasting, preparation, mitigation, management and recovery.



## Future Work

- Continue representing geodetic community through active participation on the Programme Board and its Subgroups on Sendai and Sustainable Earth Observations
- **Participation in Sendai Subgroup facilitates tightly-coupled overlap with GGOS Geohazards Focus Area and IUGG GeoHazards Commission, creating threefold opportunities for leverage in developing both policy and infrastructure in support of the geodetic contribution to UNISDR's Sendai Framework on Disaster Risk Reduction.**
- Within the GEO Communicators Network, which provides a boost to public relations and valuable access to a very small and specialized subset of the communications and geodesy community.
- **Better articulate, through collaboration with the programme board, the value of geodetic Earth observations to disaster risk reduction, and how these observations can take a role in prevention, preparedness, response, or recovery from disaster**
- Participation in geodetic contributions to GEO's Earth Observations for the Sustainable Development Goals (EO4SDG).
- Leverage representation and participation within GEO to "ride the wave" of new Secretariat Director's vision of a GEO whose work has real purpose, outcome, and effects.



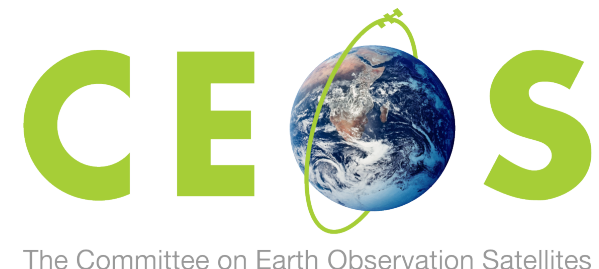


## **Participation and Representation in External Stakeholder Organizations**

➤ Committee on Earth Observation  
Satellites (CEOS)

# Committee on Earth Observation Satellites (CEOS)

- Gross will be giving a presentation at the upcoming CEOS Plenary, discussing what GGOS might need from participation in CEOS as an Agency/Partner Update. This is an opportunity for GGOS to speak about its plans and strategies in relation to CEOS, as well as the benefits and expectations of CEOS from the GGOS perspective.
- Initial contact established with the CEOS **Ad Hoc Team on the Sustainable Development Goals (AHT SDG)**, which highlights the potential role for Earth observations in supporting the global indicator framework of the United Nations Sustainable Development Goals
- **Earth Observations for the Sustainable Development Goals:** AHT SDG works closely with GEO (through the collaborative [EO4SDG campaign](#)) to highlight the numerous applications of Earth observations that provide data critical to monitoring progress toward the SDGs, and thereby further illustrate the immediate and secondary values of Earth observation data.
- Future collaborations between CEOS/GEO and GGOS in regard to its contributions toward the UN SDGs are in progress. These collaborations include a possible one-day workshop/training on key relevant SDG indicator monitoring tools, and closer collaboration with not only GEO and CEOS, but also any overlaps with the UN GGIM Subcommittee on Geodesy.



The Committee on Earth Observation Satellites



## **Participation and Representation in External Stakeholder Organizations**

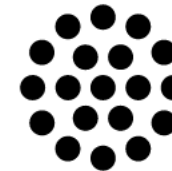
- **International Council for Science (ICSU)**  
**World Data System (WDS)**

# International Science Council (ISC) World Data System (WDS)



WDS Members serve as trustworthy scientific data services involved in:

- Capture and storage,
- Long-term preservation,
- Discovery, accesss, and retrieval,
- Aggregation, analysis, and visualization,
- and other associated aspects of open data.



**International  
Science Council**

GGOS is a partner member of ISC-WDS, and may play an important part in encouraging data providers of the WDS to adopt or renew their **CoreTrustSeal**, the new WDS data certification process.



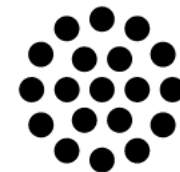
**CoreTrustSeal** offers to any interested **data repository a core level certification** based on the DSA-WDS Core Trustworthy Data Repositories Requirements catalogue and procedures. This **universal catalogue of requirements reflects the core characteristics of trustworthy data repositories** and is the culmination of a cooperative effort between DSA and WDS under the umbrella of the Research Data Alliance to merge their data repositories certifications.



# WDS Goals



- Enable universal and equitable (full and open) access to quality assured scientific data, data services, products, and information
- Ensure long-term data stewardship
- Foster compliance to agreed-upon data standards and conventions
- Provide mechanisms to facilitate and improve access to data and data products

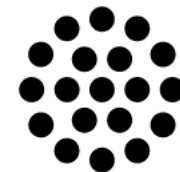


**International  
Science Council**

# WDS Strategic Targets



- Improving the trust in, and quality of, open scientific data
- Nurture active scientific data services communities
- Make trusted open data services an integral part of international collaborative scientific research



**International  
Science Council**

## Current External Relations Projects

- Connecting United Nations Initiatives with the GGOS Geohazards Focus Area through the GAR19 Report
- Connecting the GEO Work Program's United Nations Initiatives with GGOS

# GGOS External Relations Near-Term Goals

## *Two Paths to Connect GGOS with the United Nations*



- Earth observations also play a major role in monitoring progress toward, and achieving, the SDGs.



# UNISDR

United Nations Office for Disaster Risk Reduction



## UN World Conference on Disaster Risk Reduction

2015 Sendai Japan

- Geodetic observations have a clear role in helping to reduce the risk of disasters, as well as contribute to disaster preparedness with better mitigation and response.



# *Connecting the GEO Work Program's United Nations Initiatives with GGOS*

There is tremendous potential to increase the exposure and impact of GGOS by identifying potential contributions and connecting existing relevant work to efforts in support of both **UN SDGs** and the **Sendai Framework**.

GGOS has the potential to help by:

- ❑ **Facilitating linkages** to agencies and other providers of geodetic data
- ❑ Making existing geodetic data **discoverable** and easily **accessible**
- ❑ Working toward **standardization**

Participation at the GEO Programme Board level ensures that IAG/GGOS efforts in alignment with GEO's global priorities (supporting the UN SDGs, Sendai Framework, as well as the Paris Agreement on Climate Change) are well supported and complimentary to other related work – as well as preventing unnecessary redundancy of work.

**Geodetic observations have a clear role in helping to reduce the risk of disasters, as well as contribute to disaster preparedness with better mitigation and response. Earth observations also play a major role in monitoring progress toward, and achieving, the SDGs.**

# Connecting United Nations Initiatives with the GGOS Geohazards Focus Area through the GAR19 Report



UNISDR

United Nations Office for Disaster Risk Reduction

GAR

Global Assessment Report  
on Disaster Risk Reduction

- GATEW/GTEWS has successfully submitted a chapter/paper for the 2019 UN Global Assessment Report on Disaster Risk Reduction (GAR19), which is **a major UN report addressing disaster risk reduction that contributes to regional and global platforms for disaster risk reduction, as well as the high-level political forum on sustainable development**
- *Developed through an extensive set of partnerships with international organizations, governments, businesses, academic and research institutions, the GAR is both an ongoing process of evidence generation and policy engagement, and a product – in the form of a biennial report published by the UNISDR. The process contributes directly to greater access to risk information for decision-making, and identifies feasible practices that can be employed at the local, national, regional and international levels.*
- *The next [2019] GAR will provide:*
  - *an update on global progress made in implementing the outcome, goal, targets and priorities of the Sendai Framework and disaster-related Sustainable Development Goals (SDGs)*
  - *current and future risk trends introducing systemic risk perspectives as represented in the forthcoming Global Risk Assessment Framework (GRAF)*
  - *cutting edge, innovative research and practice in disaster risk management and good practice on how to manage and reduce disaster risks*
  - *an introduction to the wider scope and systemic nature of hazards to be considered in implementing the Sendai Framework.*

## Future External Relations Projects

*As GGOS connections with the SDGs and Sendai Framework mature, more opportunities to support these initiatives will become available. GGOS External Relations will pursue the most relevant and impactful avenues to ensure that IAG/GGOS enables the greatest use of geodetic data in support of these United Nations initiatives and beyond.*

- IAG/GGOS Geodetic Academic Network
- External Essential Variables Identification

# *An IAG/GGOS Geodetic Academic Network*

- The primary objective of the **UN-GGIM Academic Network** is to support the aims and objectives of UN-GGIM as it sets the agenda for the development of global geospatial information and promotes its use to address key global challenges. Some GGIM regional entities (Americas, Asia-Pacific, Arab States, Europe, Africa) have also developed regional academic networks. Furthermore, the
- Subcommittee on Geodesy has its own **Focus Group on Education, Training, and Capacity Building (ETCB)** in response to the GGRF resolution.
- IAG/GGOS may be well positioned to lead implementation of the ETCB recommendations in the coming years, which may require establishing an Affiliate or Focus Area to address this need.



# *External Essential Variables Identification*

Ongoing identification of initiatives in parallel to GGOS's own recent initiative to define Essential Geodetic Variables.

- Reyers, Belinda & Stafford Smith, Mark & Erb, Karl-Heinz & Scholes, Robert & Selomane, Odirilwe. (2017). [Essential Variables help to focus Sustainable Development Goals monitoring](#). Current Opinion in Environmental Sustainability. 26-27. 97-105. 10.1016/j.cosust.2017.05.003.
  - The imperative to measure progress towards Sustainable Development Goals (SDGs) has resulted in a proliferation of targets and indicators fed by an ever-expanding set of observations. This proliferation supports one principal purpose of the SDGs: to provide a framework for coordinated action across policy domains.
  - Systems approaches to defining Essential Variables have focused monitoring of climate, biodiversity and oceans and offer opportunities to coordinate SDG monitoring.
  - The authors propose four criteria and a process to identify **Essential SDG Variables (ESDGVs)**, which will highlight interactions and gaps in current monitoring. The ESDGV criteria suggest a research agenda to: develop and test interdisciplinary system models; test transformations theory for sustainable development; analyze policy interactions; and formulate models to support further refinements of ESDGVs and SDG monitoring.
- ICSU has also explored the idea of developing **Essential Sustainability Variables**

# THANK YOU!

✓ Follow GGOS on Twitter @IAG\_GGOS

# DRR & the SDGs

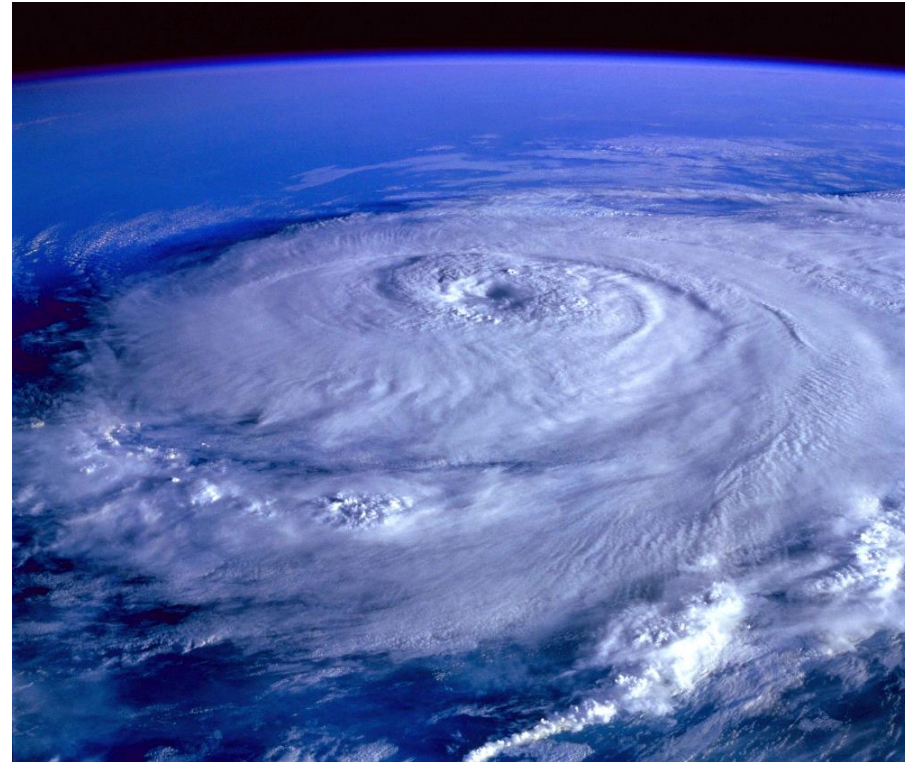
## Informing DRR Indicators for SDGs 1, 11 and 13



### Aligning disaster-related SDGs with the Sendai Framework for Disaster Risk Reduction.

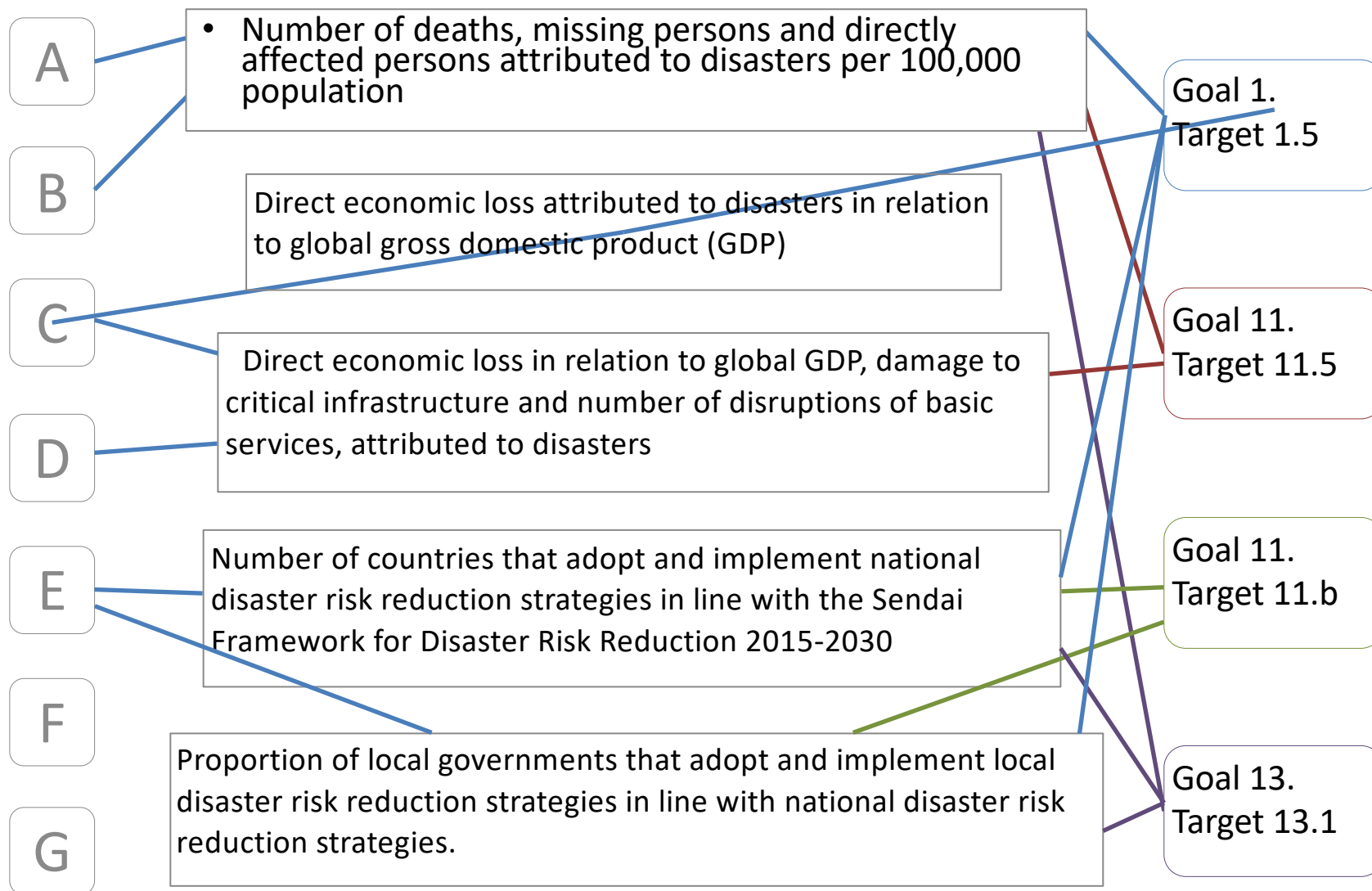
GEO is working to support the Sendai Framework and to address disaster-related goals, targets and indicators of the 2030 Agenda:

- 3 SDGs
  - 1: End poverty in all its forms everywhere
  - 11: Make cities and human settlements inclusive, safe, resilient and sustainable.
  - 13: Take urgent action to combat climate change and its impacts
- 4 SDGs Targets
- 11 SDGs indicators



## Sendai Target

## SDG / Target



Note: the indicators above are proposed by the IAEG-SDGs to the UN Statistical Commission, 48<sup>th</sup> Session, and as such are not yet considered final.